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New England Cities — Manchester N.H. (Photo by courtesy of Eames Studio.)

Coordinated Forest Fire Protection Measures Needed to Stem N. E. Conflagrations

THE February issue of the *Monthly Review* carried an account of the damage done by the forest fires of October 1947 in Maine, New Hampshire, and Massachusetts. The story was confined to these three states because the other three states, Vermont, Rhode Island, and Connecticut came through with relatively minor losses.

A significant fact, brought out in the previous article, is that these forest fires caused far greater monetary losses to improved property such as homes, buildings, machinery, and service equipment than to the forests themselves. It is obvious that this consideration in itself justifies extreme efforts to prevent future recurrences. Adequate appreciation of the importance of the forests as New England's most valuable single natural resource reinforces the argument in favor of truly effective forest fire protection.

Recommendation of methods by which forest fire protection can be improved is a job for the public, quasi-public, and private agencies directly concerned. All that will be attempted here is an analysis of the factors contributing to the development of the crisis of last October. Such an analysis is important because unless combinations of hazardous conditions, like those of last fall, are offset by deliberate planning and organization, similar conflagrations can be expected.

Forest fires start in New England, as elsewhere, mostly because of what people do or don't do. A few result from non-human causes such as spontaneous combustion and, more commonly, lightning. Lightning is, for example, credited with starting 0.4 per cent of the forest fires in Rhode Island and 7.4 per cent of those in Maine in 1945. Deliberate incendiarism for spite, a thrill, employment on the fire line, or other considerations, accounts for a small percentage. Entry into the woods for business reasons — logging, sawmilling and to engage in other forest industries — inevitably causes some fires. Human carelessness, indifference, and ignorance must, however, accept the blame for the great majority.

Countrywide, the secular trend of the number of forest fires per year is upward and New England is no exception. This trend is attributable largely to increasing population and its greater mobility; more people are coming in contact with the forest areas. There are more hunters, fishermen, berry pickers, campers, and other recreationists in the woods. Every fire is a potential conflagration. The effect of the weather excepted, the extent to which the development of conflagrations is prevented in the woods is, as in the cities and towns, largely the result of the efforts of the fire fighting forces.

The forest fire protection effort is divided into two major phases, prevention and control. The prevention effort includes legislation prohibiting activities likely to start fires, public education, closing forest areas to public entry, and other methods. Control is effected by early detection of fires (by lookout stations, air and ground pa-

MAINE FIRE HAS LITTLE EFFECT ON RESORT ACCOMMODATIONS

DESPITE the devastating effects of the forest fires, the loss incurred by Maine's recreation industry was at a minimum. Governor Horace A. Hildreth had the following to say at the Twenty-third New England Conference of The New England Council, November 20, 1947:

"*With respect to the state's recreational business, there were very few instances of loss of property that will affect the tourist and vacation trade next year . . .*

"*Most of the state's meccas for vacationers and tourists were entirely untouched by fire, and boys' and girls' camps came through unscathed. The many seashore resorts with one or two exceptions will be found as attractive as ever, and most of those summer visitors from outside Maine who own or rent camps at our inland lakes and ponds will find these properties intact and the natural beauty surrounding them unharmed.*"

trols), speedy sounding of alarms and rapid responses by extinction crews, by efficient equipment in adequate amounts, by training and experience resulting in knowledge how to attack and defeat fires, and by a firm determination to keep fire damage at the irreducible minimum.

These efforts cost money. Generally speaking, in New England funds for the prevention activity are provided by the states, with assistance from the Federal Government. Lookouts and patrols are financed in the same manner. The cost of fighting fire is, with some exceptions, borne by the towns. In the Forestry District (wild lands) of Maine, fire fighting is entirely a state affair. In Connecticut the state bears all initial expenses but later takes partial reimbursement from the counties. In Maine and New Hampshire the state laws provide for reimbursement by the state of one-half, and in some cases more, of the fire-fighting costs incurred by the towns. The Massachusetts law provides that when necessary, in his judgment, the State Forest Fire Warden may assume charge of a fire in any town. All costs subsequent to this assumption of authority are borne by the state.

Background Conditions

The Weather

Although the spring of 1947 was backward and unusually wet, in midsummer a complete reversal to abnormally hot and dry weather took place in New England. Precipitation deficiencies were the general rule, particularly in the coastal and southern portions of Maine, southern New Hampshire, and much of Massachusetts. September was generally somewhat better but not enough to compensate for the dryness of August. In October the drought intensified greatly and brought a climax of desiccation to foliage, grass, and soil already almost totally deprived of normal moisture by two months of deficient rainfall. There is much testimony to the effects of this dryness. Farmers could not do their fall plowing because the soil would not furrow. In many areas leaves merely dried up instead of showing autumn coloration.

The weather stations shown in the chart were selected as representative of drought conditions where forest fires raged most destructively in Maine, New Hampshire, and Massachusetts. The chart also shows stations in Connecticut where the fire losses were far less severe. Bar Harbor, Maine, received a little more than 27 per cent of normal rainfall between August 1 and October 27 and between October 1 and October 27 only two per cent. Hartford, Connecticut, received less than one per cent of normal rainfall between October 1 and October 27 but 58 per cent for the whole period August 1 to October 27. The indications are that the October drought was severe in all areas but that cumulative effects during the period of almost three months were less adverse in Connecticut than in southern Maine and most of the country between. The October 1 to 27 period is used rather than the full month because there was quite general rainfall during the last four days after all the fires had been brought under control.

To the rainless condition were added extreme heat and low relative humidity. Boston records show a total average excess of temperature for October of eight degrees per day. On October 22 the relative humidity at Portland dropped to 18 per cent, compared to a normal minimum of 60 for the time of year. High winds developed on October 21 and again on October 23. According to the Portland Weather Bureau, wind velocities reached 24 miles per hour on the twenty-third. Workers on the fires thought they were nearer 60, which may have been true since it is well known that large fires increase wind velocities.

Fire Prevention and Organization

All the New England states have basic laws relating to forest fires following a somewhat general pattern governing the use of fire in the open, removal of logging slash from areas adjacent to roads and property lines, the arresting of sparks from steam locomotives and sawmills, the closing of forest areas to public entry in dry times, and other statutes aimed largely at reduction of fire inceptions. In Massachusetts it is unlawful to build an open fire, even in a back yard, without a permit from the Town Warden or other designated official, who generally may not grant such permits unless the ground is substantially covered with snow or recent precipitation has eliminated fire hazards.

These laws are all enforced with varying degrees of effectiveness. Many of the autumn leaf-raking fires to be seen almost any day in October and November, for example, may be illegal but there is no question but that the existence of these laws has some effect in reducing the number of fires.

All the states have organizations, under the direction of the Forestry Departments, charged with responsibility to reduce forest fire losses. In the Forestry District of Maine, largely consisting of unorganized towns, the state does the whole job. October 1947 losses there were of minor importance. Connecticut, where October losses were not extraordinary, has a somewhat similar system. Town Wardens, appointed by the State Forest Fire

Warden, are under the direct authority of the State and District Foresters. They remain in office as long as they perform satisfactorily. Town Wardens are also appointed by the State Forester in New Hampshire and serve under his direction as Deputy State Wardens.

In Massachusetts and the organized towns of Maine the fire wardens are appointed annually by the towns themselves subject to approval of the State Forestry Department which, with rare exceptions, follows almost automatically. These Town Wardens have full authority on going fires, superseding that of the state and district foresters.

Development of the Catastrophe

The weather set a stage ideal for the development of forest fires and by the end of the first week in October they had begun to spring up in profusion, every day adding to the total number reported. Day-to-day records are not available but the situation is dramatized by the fact that the Massachusetts forest fire lookout stations reported 728 fires in October, an average of more than 23 new fires per day. Most of these were quickly controlled as is indicated by the fact that the town wardens had reported, by the end of the year, only 285 October fires. They apparently considered the other 443 to be insignificant events not worthy of formal reporting.

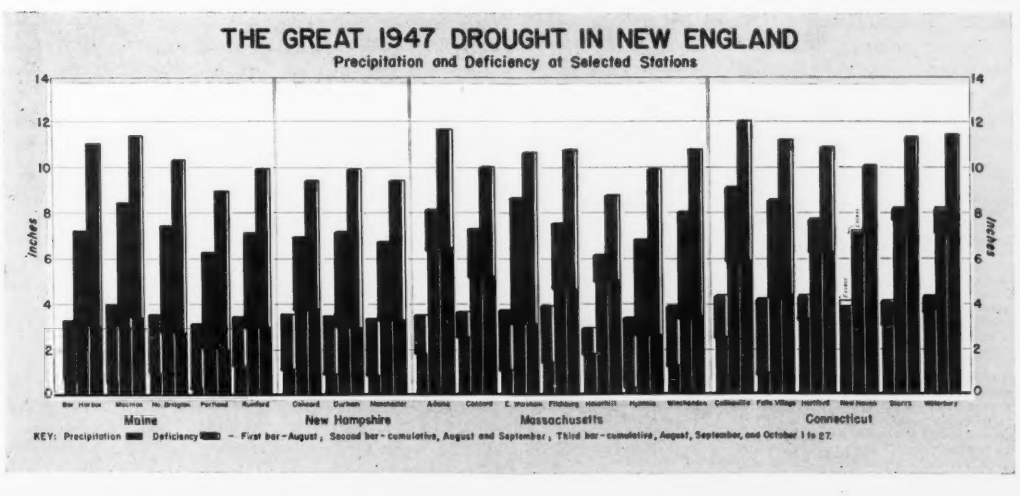
This high incidence of fires, most of which were stopped while still small, was general over almost all of New England. Maine reports a total of 475 fires during the period, 350 in the organized towns. The great loss suffered by the state is entirely due to failure to control 12 of these fires while they were still small and relatively harmless.

The Bar Harbor fire, for example, started on October 7 but it was not until October 23, sixteen days later, that it "blew up" and entered the town. The Shapleigh fire, which contributed in large part to the burning of 113,000 acres of forest in York County, started on October 17, six days before it went on its rampage. The Massachusetts State Forest Fire Warden reports that 83 forest fires were in progress in the state on October 23 (the "blow-up" day) and that 63 of these were "old" fires, i.e., fires that had been burning from one to as many as four or five days previously. The North Kennebunkport fire, which destroyed the seashore resorts of Goose Rocks and Cape Porpoise on October 21, had been burning for exactly a week and had repeatedly threatened serious damage to improved property in Biddeford and Kennebunkport.

Many specific instances of admirable performances of forest fire protection organizations in the face of supreme difficulties are matters of record. Nevertheless, the disastrous conflagrations also show in the record. As is usual under such circumstances, there is some controversy and shifting of responsibility, but neutral observation discloses some of the significant elements of an answer to the question of how well protection performed.

Part of the answer, and perhaps the most significant part, has been implied in the observation that many of the destructive fires were outgrowths of fires that had burned for days without being extinguished while still relatively harmless.

In general, the smaller the town, the weaker the fire protection. Many rural communities have little or no effective equipment, training, organization, or plan for coping with forest fires. Although many valiant efforts have been recorded in emergency situations, the population does not turn out voluntarily in a body, as it is said to have 50 years ago, and put forest fires out as a public duty. Too many volunteer fire fighters expect to be paid and paid well for their time. They prefer to work regular daylight hours. Determination to extinguish a fire is too often lacking and is replaced by a blind hope that everything will be all right. Some crews leave fires unattended at nightfall and go home to rest, hoping, but not knowing for certain that they have extinguished them. Too frequently they have to go out next day and do it all over again. Experienced and trained forest fire fighters know that one man can do more at night than 20 the next afternoon. Night patrol and mop-up crews are kept on all fires in


THE GREAT 1947 DROUGHT IN NEW ENGLAND
Precipitation and Deficiency at Selected Stations
Inches
Maine
New Hampshire
Massachusetts
Connecticut
KEY: Precipitation Deficiency – First bar–August, Second bar–cumulative, August and September, Third bar–cumulative, August, September, and October 1 to 27

Connecticut until there is no danger of rekindling.

The confusion and lack of organization when the fires of southwestern Maine got out of control bordered on the chaotic.[1] They became holocausts because there had been a lack of adequate plans, of provision for leadership, and of central control. Equipment, supplies, and manpower had to be poured in from outside in great quantities.[2] Order was eventually restored and all the fires were stopped without benefit of rain, but after great damage had been done.

Conclusions

The preceding text indicates significantly, it is hoped, why the October 1947 forest fires resulted in states of emergency and, in numerous cases, major public disasters. Critical weather conditions put forest fire protection to an extreme test. More than 1,350 fires, one for each 25,000 acres of forest area, were reported in all six New England states during a month not ordinarily considered particularly dangerous. Fire prevention measures were nevertheless functioning in approximately their normal manner. Forest areas were closed to public entry as is usual in times of drought though the question whether all the closures came early enough can be legitimately raised.

The accompanying chart shows that the occurrence of fires, and the consequent load on local protection forces, varied greatly. Occurrences were heaviest in Rhode Island and lightest in the Forestry District of Maine. The chart also shows, however, an absence of relationship between the number of fires and the severity of their consequences in terms of areas burned. The per cent of forest area burned was greatest in the organized towns of Maine, with Massachusetts and New Hampshire following in the order named. Number of fires is not the sole measure of the difficulties with which the protection forces contended and the sum total of adverse factors, weather, forest type, and other conditions was observably greater in some localities than in others.

Without attempting to appraise relative forest fire fighting efficiency, it is possible to draw some general conclusions. First, the conflagrations resulted, to some extent, from failure to extinguish some of the fires over a period of days during which they remained relatively small and harmless. There is evidence of lack of night patrol and aggressive mop-up activity. Second, local town forces lacking adequate equipment, manpower, and organization, were relied upon to too great an extent. These two factors are somewhat interrelated. Third, where the fires reached the conflagration stage there was a lack of predetermined centralized system, order, organization, and coordinated plans, at the state or district level, for coping with them.

Notwithstanding this general observation, good starts have been made here and there toward eliminating this deficiency. Some years ago John E. Holden, Fire Department Chief of Newington, New Hampshire, demonstrated the adaptability of oil and milk tank trucks to forest fire fighting. As a result of his efforts a system has grown up in New Hampshire whereby many such tanks are regularly on call for emergency water-carrying service. There is no question but that the use of this type of equipment was of very great significance in reducing losses in New Hampshire and southwestern Maine last October below what they might otherwise have been.

Inadequate financial support of the forest fire protection forces on the "ounce of prevention" principle may have been a factor but there may also be opportunities for reorganization and more effective action under existing appropriations.

The protection of the buildings in a village may possibly be the sole concern of the residents. It is clearly demonstrated that the protection of the forests of a town is not the sole concern of the townspeople. Residents and taxpayers many miles away have a direct stake in the manner in which every forest fire is handled.

Action based on recommendations of the Conference of Forest Officials, The New England Council, would have far-reaching effects in preventing the recurrence of disasters like that of October 1947.

RECOMMENDATIONS PRESENTED TO THE NEW ENGLAND GOVERNORS CONFERENCE BY THE CONFERENCE OF FORESTRY OFFICIALS THE NEW ENGLAND COUNCIL JANUARY 1948

1. New England and each state therein should prepare a comprehensive forest fire control plan. This plan should be prepared in consultation with a committee of representative citizens.
2. New England should establish immediately for action during forest fire emergencies a central agency to coordinate the procurement and movement of men, supplies and equipment to affected areas.
3. A similar central agency should be established in each state.
4. Forest fire control activities in all New England states should be the responsibility of and under the complete jurisdiction of the respective State Forestry Agencies. Where necessary, laws in each state should be enacted promptly to accomplish this end.

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[1]Parker M. Merrow, Editor of the Carroll County, New Hampshire Independent, an on-the-ground worker on one of the bad New Hampshire fires and an observer of the York County, Maine, fires says in a critique written for distribution to forest fire fighting executives: "First of all, leadership was woefully lacking and handicapped . . . too high a ratio of fire fighters to Deputy Wardens. We were handicapped by lack of replacement leadership. After 12 hours Wardens and Deputy Wardens had given all they had . . . It is foolishness to fight a fire to a near stop in 12 hours and then let it start up and run again because neither replacement leadership nor fighters are available. We were terribly handicapped through lack of centralized control. We never knew where men and equipment were or who had authority to move them. We had no over-all plan or coordinated command."

[2]Warren T. Kimball, Engineer, National Fire Protection Association says with respect to the York County, Maine, fires: "The War Assets Administration provided 10,000 feet of 2½ inch hose. . . . Some 2,000 men were fighting these fires. . . . Some 100 oil and dairy trucks were mobilized to carry water. . . . The Maine National Guard was sent into action. . . . Radio-equipped taxicabs proved helpful in providing emergency communications." Engine 39 of the Boston Fire Department was dispatched to Biddeford, Maine, the first time in history that Boston equipment was sent so far from the city.

Financing European Recovery

THE war smashed the delicate mechanism by which European countries in prewar years made their living. Its physical destruction and dislocation of Europe's transport system caused a paralysis of production from which western Europe has not yet fully recovered. The war also disrupted the flow of vital raw materials from southeast Asia. This broke the network of multilateral trade which used to provide, directly or indirectly, large earnings of United States dollars for western Europe.

The unbalanced flow of goods and services among nations has imposed severe limitations on the ability of many European countries to pay for their imports. Before the war, the 16 countries participating in the Marshall Plan negotiations were able to pay for what they bought from the outside world from the current earnings of their exports, their shipping and investments, and from other "invisible" income such as emigrants' remittances and tourist travel.

Deficits in one part of the world were normally balanced by surpluses with other parts. For example, Great Britain typically used to buy more from the United States than she sold to the United States. She generally sold more to the Far East than she bought from it; and the Far East, in turn, used to have a surplus of sales to this country. Dollars were traded from the Far East to the United Kingdom. That is a typical example of how the pattern of multilateral trade and payments works in normal times.

Increased Foreign Exchange Needs

The war broke up the elements of multilateral trade. The war also created new demands for dollar exchange to buy goods for reconstruction, but it reduced the supply.

(1) Overseas investments were sacrificed and overseas indebtedness was built up in order to obtain supplies both during and after the war. Merchant fleets were sunk. To many countries the loss of income from shipping services is very serious. Instead of earning enough from their shipping and investments to cover nearly a quarter of the cost of their imports, as they did before the war, many "Marshall Plan" countries now must make net payments on these accounts to the rest of the world.

(2) The cost of imports has gone up compared with the cost of exports. In economists' language, the "terms of trade" have shifted adversely. Prices of essential food and raw materials which "Marshall Plan" countries must import have risen sharply compared with prices of the manufactured goods they export. This means simply that these countries must part with a larger physical quantity of their own goods and services than before the war to obtain a given amount of imports. In practice, this has generally involved an increase in import surpluses.

(3) The volume of supplies which can be obtained from southeast Asia and from eastern Europe (including eastern Germany) has been substantially cut. This means added reliance for the time being on imports from the American Continent. Western Germany, for example, must now cover from American sources almost all the food imports formerly supplied by surplus food-producing areas of eastern Europe.

Obstacles to Domestic Production

It is very difficult to fill the payments gap because, as a result of the war, import needs have increased while export capacity has diminished. Even in prewar days the highly industrialized countries of western Europe depended upon imports of food, petroleum products, and raw materials to support their industrial operations.

Current needs for these commodities are larger than ever. Stocks and equipment must be replenished and deficiencies in domestic production, especially food, must be made good. Certain commodities in which the area is normally self-sufficient, such as coal, are being obtained from abroad until domestic production can be revived. All these things mean added import requirements even when luxury imports are sharply curtailed, as they have been in most countries.

Production, meanwhile, is not furnishing "Marshall Plan" countries with an adequate supply of dollars. In general, markets are available but the flow of goods for sale, after domestic consumption and reconstruction needs are satisfied, is lagging.

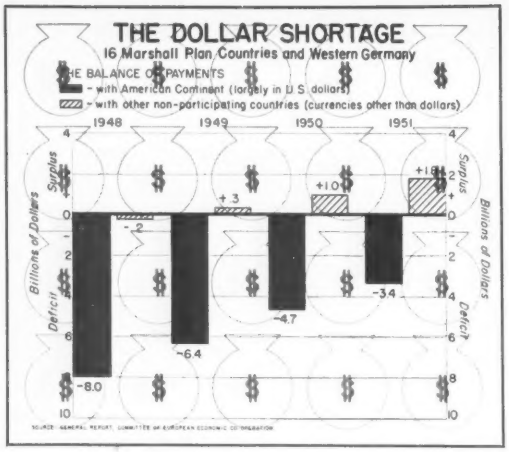
Strong domestic measures have been undertaken in order to increase industrial production. This should provide deficit countries with more goods for sale and more dollars. Fairly good results have been accomplished. Production in many of the European countries in October 1947 was above the 1938 level on a volume basis. Western Germany, Austria, Greece, and Italy are countries which have lagged heavily behind.

Even considerably increased domestic output may not solve all western Europe's payments problems in the immediate future, although it is obviously the most fundamental long-run remedy. Unfortunately, a balanced payments account with the whole world does not mean necessarily an ample flow of dollars. There is a general shortage of dollars. What is the reason for this?

The Dollar Shortage Problem

Britain and other "Marshall Plan" countries generally wish to buy more from "dollar" countries than they can sell to them. Essential purchases from dollar nations are not balanced with sufficient dollar earnings.

Basically, the world shortage of dollars goes even further. It reflects the surplus in America's balance of payments and the shortage of available foreign production for sale to the United States. More payments are currently due the Government and the people of the United States in dollars than the Government and people owe abroad. There is a surplus in our balance of payments. Thus, there



must be an equivalent aggregate dollar deficit in the balance of payments of all the other countries of the world.

This basic dollar shortage will not disappear until the United States balance of payments is in equilibrium. That means that the value of our imports and other dollar-supplying transactions must equal the value of our exports plus other dollar-absorbing transactions. Over the long-run this is a question of increasing productivity in the deficit countries and improving the flow of imports into the United States.

Temporarily, of course, deficits can be met if gold or previously acquired dollar balances are used to make payment. Dollar deficits can also be corrected temporarily out of the proceeds of grants or new loans from the United States. Those are the methods which countries have resorted to up to the present time.

American Foreign Aid Since V-J Day

Up to now, what western Europe could not pay for through current earnings and from gold and dollar holdings has been supplied largely through United States aid. From the middle of 1945 through 1947 we made nearly $8 billion available to these countries in the form of loans and property credits. Another $4 billion was supplied to them through outright dollar grants. All except $2 billion had been used up by the end of 1947.

Additional help came from Canada, various Latin American countries (notably Argentina), private relief and remittances, and — in the last eight months of 1947 — $750 million from the newly-inaugurated International Fund and Bank.

One of the most important sources of dollars was the $3.75 billion British loan, concluded in July 1946. Not only England but the whole world has helped itself to the British loan pool of dollars set aside for use in settling adverse payments balances. This was especially true after July 1947 when, under terms of the agreement, third countries became eligible to convert their current sterling earnings into dollars. The British Chancellor of the Exchequer revealed that more than half the loan spent up to last August 20 had been transferred, directly or indirectly, to other countries. This meant funneling dollars to the whole world because other nations, in turn, could use this money to settle their own trade deficits with the U. S.

This source of dollar exchange was virtually dried up by the end of last August. The problem of how to avert dollar deficits spread from Britain and Europe to other parts of the world when the remaining $400 million of the British loan was "frozen". (Subsequently, it has been unfrozen and used up.) Non-European countries could not get paid in dollars for their exports to Europe. Thus many countries who had previously escaped payments difficulties were forced to draw increasingly upon their own gold and dollar reserves to pay for imports from the United States.

The Paris Conference

Exhaustion of the British loan coincided with European negotiations for new aid. Last July the 16 countries participating in the Paris Conference (Committee of European Economic Cooperation) indicated to the United States that they would need added dollars to rebuild their industries and tide them over the temporary emergency.

The Paris program is essentially a short-term program dealing with the years 1948 through 1951. It grew out of last June's speech by Secretary Marshall proposing European self-help backed up by large-scale American "friendly aid".

The essential task set at Paris was to show how western Europe can get back on its feet in the next four years provided it is given adequate aid from the United States.

Main feature of the program is a large planned increase of industrial and agricultural production above present levels and in most cases above prewar levels. For instance, "Marshall Plan" countries hope by 1951 to push their electric power output to double what it was before the war; steel production to 173 per cent of the prewar rate; coal production to 113 per cent and cereals to 105 per cent of prewar.

Greater expansion in output is anticipated from industry than from agriculture and mining in western Europe. "Marshall Plan" countries expect to wind up with dietary levels somewhat lower than prewar, especially in meat and in fats and oils. Even then, sufficient dollar balances to meet their import needs will not be available.

How are "Marshall Plan" countries planning to acquire the necessary dollars which they lack? The 16 nations hope first of all to expand the value of their merchandise exports. That is the first step to take because it will provide additional needed dollars for the selling countries. That is a special reason why continuance of the American reciprocal trade agreements program* is considered to be a necessity at this time. Favorable developments are also hoped for from the "invisible" side of the balance sheet; that is, through promoting American tourist travel and rebuilding depleted merchant fleets.

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*See "New England's Stake in International Trade," this *Review*, May 1947.

Adding up all of western Europe's needs, the Paris experts arrived at a foreign exchange deficit with the American Continent of about $22 billion from 1948 through 1951. They deducted from this amount equipment worth $3 billion to be paid for through International Bank loans. That left a net $19 billion deficit for the four years to be met by foreign help.

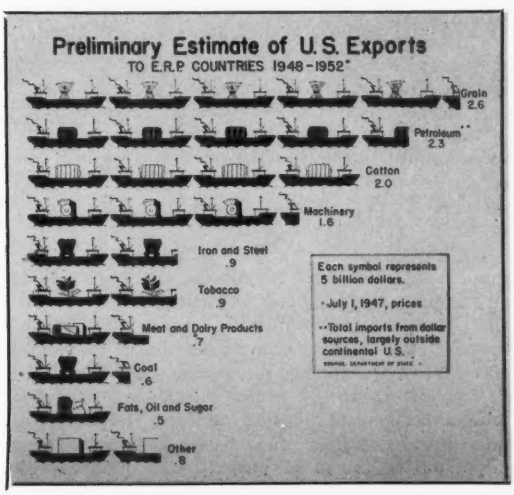
More dollars will be needed in the early than in later phases of the aid program. Expected deficits each year went down in a sharply decreasing scale in the scheme mapped out at Paris. For instance, in 1948 the 16 "Marshall Plan" nations and western Germany would run an $8 billion deficit with the American Continent. This should be cut down to $3.4 billion by 1951. After 1951, if all goes as planned, the "Marshall Plan" countries should be near balance and further aid will not be needed.

Marshall Plan Legislation

Paris calculations of their probable four-year deficit form the basis, with adjustments, of the ERP (European Recovery Program) aid program requested of Congress. Originally a general authorization of $17 billion was asked for to cover the entire period from April 1948 through June 1952. This figure of $17 billion was shortly dropped altogether from the program. The time-period for Senate appropriations was scaled down to the first 15 months of the program and, later, to 12 months starting April 1.

The Senate Foreign Relations Committee's corresponding cut in initial appropriations was from $6.8 billion to $5.3 billion. Reduction of the appropriations period from 15 to 12 months will not have any effect on the dollar scale of aid.

Effects of the aid program on the domestic economy have been the subject of several official reports. Secretary of the Interior J. A. Krug made an estimate of our national resources set against the background of the stated needs of western Europe. The President's Council of Economic Advisers, headed by Dr. Nourse, describes the effect of Government-financed exports upon home production, consumption, and prices.



Determining the limits "within which the United States can safely and wisely extend aid to western Europe" is the purpose of the Harriman Report, prepared by a private group of 19 industrialists and economic experts.

Deliveries of goods abroad under the foreign-aid program must inevitably add somewhat, in the short-run at least, to existing domestic inflationary pressures. That does not mean that we should not provide foreign aid. Inflationary price increases in American markets are primarily internal in origin. So far, goods exported under various programs of foreign aid have accounted for some of those increases, but not the major part.

Over the long-run, foreign aid should contribute more than anything else toward relieving world-wide inflationary pressures. This is especially true of price rises which reflect inadequate production in the world at large. United States fertilizers, in view of Europe's soil depletion, can probably raise Europe's food output more than their use here would increase our own output. If American deliveries of coal, raw materials, and factory equipment permit full operation of Europe's industrial plant, current excessive demands for American industrial exports can be cut down as well.

Foreign Aid and the Level of Gross National Product

We may illustrate the moderate *over-all* inflation-creating effects by setting the size of the proposed foreign aid program against the annual value of the nation's production of all goods and services — the gross national product. Our gross national product in 1947 was $230 billion. The United States export surplus to all countries was approximately $11 billion, or only five per cent of the gross national product.

Last year's ratio of exports to gross national product was probably larger than what we shall have in 1948, including ERP as proposed plus our regular commercial net exports. Thus the impact of foreign aid in 1948 will at no time be heavier than it has been in the past year.

Our export surplus in the latter part of 1948 probably cannot exceed an annual rate of $4 to $5 billion unless Congress provides other countries with more dollars. This estimate (Nourse Report) includes spending which may be expected from aid already authorized and from the use of any gold and dollar resources foreign countries may have on hand now. If we assume no new foreign aid, the 1948 export surplus will be less than half the surplus at the second and third quarter 1947 rate.

Reduction in exports would have to be telescoped into a very short period if more dollars are not provided. Corresponding rapid adjustments in the domestic economy would be required.

General conclusion of the studies made is that over-all amounts involved in foreign aid do not impinge critically on our ability to supply, especially as compared with total exports in 1947. The over-all inflation-producing effects of the program appear to be fairly moderate if it is financed by non-inflationary methods.

When foreign governments use their own gold and exchange resources to finance their import surpluses from us the effect on our price level is just as inflationary as when our Federal Government finances their buying by sales of securities to the banking system. The country's excess internal buying power is added to in either case. The same results follow if countries pay for needed supplies by drawing on their International Monetary Fund credits.

However, the country's national debt and its money supply are not affected the same way by the different methods of financing foreign aid. Two types of financing need most to be distinguished: use of a Treasury surplus and sale of securities to the public.

(a) Let us first suppose that ERP is financed entirely out of the Treasury's surplus funds; that is, excess current Treasury cash receipts over current Treasury cash outlays. Added foreign spending, which is inflationary, is partially offset by added tax drains on the public, which are deflationary. *If taxes are increased by exactly as much as the Government's foreign grants, inflation is minimized.*

Inflationary effects of Government grants abroad are not counteracted if the Treasury simply transfers surplus funds, presently earmarked for debt reduction, to foreign aid. In that case there are no additional tax increases to siphon off consumers' purchasing power and to match new outlays from abroad.

Inflationary pressures are measured by what the program does to the Treasury's current cash surplus. Tax reduction is probably more likely than tax increases for the present. Obviously, if taxes are reduced while expenditures for foreign aid are raised, the Treasury's cash surplus is cut down from both the spending and receipts side. Thus, *additional tax reduction at this time will intensify any inflationary effect of spending for foreign aid.*

Effect on Money Supply

Let us turn to effects on the country's money supply. Foreign aid paid out of our existing budget surplus does not directly contribute additional supplies of money to the economy, as bank financing would do. But because foreign aid cuts down the Treasury's surplus, less funds are available for use in drawing down bank-held debt and the nation's quantity of money. Financing aid through an existing Treasury surplus will mean a greater money supply than we would have if no foreign aid at all was offered and the surplus was used to retire debt.

(b) Selling securities to the public to finance foreign aid is almost comparable to raising taxes for the purpose. As the securities are paid for and the funds are spent there is no increase in the public's cash and deposit holdings. Deposits are merely transferred from nonbank sources to the new foreign aid organization. United States exporters and other citizens receive the dollar balances ultimately when they are spent. Supplies of money are transferred from one group of private citizens in this country to another. No monetary expansion is involved but, obviously, the debt and its carrying cost are increased by the loan program.

Equally important as the program's financing at home is its financing in the receiving countries. In the Paris report fiscal and monetary reform was given priority equal to that of increased production. The 16 participating nations gave pledges to carry out necessary programs of financial stabilization. In some countries the persistence of inflationary forces has primarily a fiscal origin; in others, it stems mainly from a redundant currency base, over-expansion of bank credit, or misdirection of productive activity.

From the receiving countries' point of view foreign aid, taken by itself, is deflationary. Within the markets of the receiving countries there are available not only the goods produced at home, but also the supplies received from abroad. Thus more is put on the market to meet consumers' demand than is being currently produced.

Four Types of Aid

Draft legislation proposed by the administration leaves to the Economic Cooperation Administrator, consulting with the National Advisory Council, the decision whether loans or grants should be made to any particular borrower. Capacity to repay will be the criterion in each case. Four groups of participating countries are to be distinguished, according to press accounts. They include: (a) countries who will receive aid in the form of grants only; (b) countries who will only receive loans; (c) countries obtaining both grants and loans; (d) countries who must pay cash.

In the Harriman program a clear distinction was drawn between emergency relief and long-run redevelopment projects. The former was to be financed through grants; the latter, by loans. Outlays on food, fuel, and fertilizer might be appropriated annually in the form of grants-in-aid. Reconstruction projects, or long-term capital investments, were to be paid for by an inflow of private capital or through use of existing international agencies such as the International Bank.

International Bank projects must ordinarily be self-liquidating. Use of this agency wherever possible helps assure that funds borrowed abroad for capital development are employed productively. The difficulty with this approach seems to be that some European countries are in a position to pay currently or on a deferred basis for imports of relief commodities, while others are poor credit risks even for aid supplied for purposes of reconstruction projects. Thus, although the Administration hopes to encourage International Bank financing of reconstruction projects, it does not expect a large amount of aid from that source, especially during the first year of the program.

An important feature of these plans is their recommendation that the borrowing country set aside an amount of its local currency equal to the value of the commodities which it is supplied on a grant basis. Local currencies will be placed in special accounts and earmarked for specific uses. They will be left idle to absorb excess purchasing power as long as monetary inflation persists. Later, when inflation is checked, these funds may provide an important source of savings for use in productive

local investment. Barring this plan, they can be used in reducing the national debt of many of the "Marshall Plan" countries.

Economic Effects of ERP in N. E.

The over-all inflation-producing effects of the program should be fairly moderate, as we have seen. The chief source of inflation comes from the program's demand for a limited number of commodities in very short supply. But that is the negative aspect of ERP. On the positive side of the ledger, from New England's point of view, is the beneficial stimulus which added foreign demand may provide for many of our export industries.

Findings of the Krug Report indicate that in general our economy is physically capable of providing the resources required. They also show that certain shortages which come from America's current high levels of consumption will be intensified. These shortages are particularly marked in wheat, steel, coal, nitrogen fertilizer, and certain items of industrial equipment. The last group named, industrial equipment, is one of New England's strongest income-producing sources.

Metal-working machinery (particularly machine tools), textile machinery, and electrical equipment for industrial use (such as generating equipment and insulated wire) are items in great demand abroad as part of the foreign aid program. New England in 1939 produced 25 per cent, 60 per cent, and 16 per cent of the country's total production of each of these commodities, respectively.

Alloying of nonferrous metals (New England accounted for 36 per cent of the United States total in 1939) and production of shoes (35 per cent) and tanned leather (20 per cent) should also be important in the Marshall Plan program. New England's contribution will generally be in the field of specialized industrial machinery and manufactures, rather than in agricultural products or equipment. However, in the event of surplus, potatoes, milk sours, and dried eggs may be available for export from this region.

Department Store Sales Lagging

BUSINESS decisions affecting investment, production and employment with their effect on personal incomes depend to some extent on what happens to retail sales and stocks. Businessmen are currently watching department store sales changes to find out how consumers are reacting to prices and, from the index, are reshaping when necessary their buying, production, and pricing policies. The question which will become increasingly important during coming months is whether physical volume of sales in many soft goods lines will be maintained or will recover.

An occasional drop in dollar department store sales below last year's corresponding period seems probable. These drops, when, as and if they occur, will not signal a catastrophe. They will be signs that pricing policies along the product flow channel must change if consumers are expected to increase their unit purchases and maintain dollar sales volume.

Department store sales increases over corresponding four-week periods in the previous year continued to decline in New England. Sales for 46 New England reporting stores were: +7.1 per cent for the four weeks ending December 27, 1947; +1.3 per cent for the four weeks ending January 24, 1948; and +0.7 per cent for the four weeks ending February 28, 1948. A slackened growth rate was also shown by the national figures. It should be noted that the reduced rate of increase was evident before the break in commodity prices occurred.

The department store sales index (1935-1939 average = 100, seasonally adjusted) for 112 reporting stores in the Boston Federal Reserve District is given below:

Selected Months	*1946*	*1947*	*1948*
November	230	249	
December	231	243	
January	186	215	216
February	200	219	p223

p-preliminary

As total accounts outstanding increase, credit men are likely to be busier checking credit risks now that collections have slowed down. November and December 1947 department store collection ratios to outstanding accounts at the first of the month were slightly below the same months in 1946. Furniture store collections on outstanding accounts exhibited the same tendency. Preliminary January 1948 data show that the slow-down is continuing in department stores. Collection ratios, however, are still running better than prewar 1940.

While the over-all department store inventory sales ratio seems to be satisfactory, stocks of individual departments are under close observation. In November and December 1947 the dollar values of department store stocks were four to eight per cent higher than during corresponding periods in the previous year. The stocks-sales ratio, however, remained about the same.

The department store inventory-sales ratio was still below that for 1941. The ratio of stocks and orders combined to sales for December 1947 was at the December 1941 level. For January 1948 there was a slight increase in the ratio of stocks and orders combined to sales over January 1947. The increase came from an increase in the stocks-sales ratio.

The current Easter season is very important for revealing consumer restraint or opposition to higher prices which have been causing concern in the apparel trade. Dollar sales for 46 New England department stores in the week ending March 20 strengthened and were 5.0 per cent above the corresponding period last year, after two previous decreases: —2.8 per cent for the week ending March 13 and —8.0 per cent for the week ending March 6. In terms of corresponding weeks before Easter, however, department store dollar sales changes for 1948 are less than those for 1947; the women's apparel department was least responsive.

Business Conditions

Increased Caution Characterizes Business

THE sudden and precipitate drop in certain commodity prices during the early part of February has passed without yet engendering repercussions of large magnitude. Business generally continues very active, employment and incomes are unusually high, and demands for many consumers' and producers' goods remain far from satisfied. Nevertheless, the very abruptness of the price drop was sobering for business. Increased caution, as well as reaction to pressure on reserves, is evident in the leveling off of commercial loans in recent weeks.

The sharp February drop was centered largely in grain prices, but included many other commodities such as tallow, lard, vegetable oils, hides, and cotton. In general, manufactured products did not participate in the decline, and some such as semi-finished steel and worsted goods advanced even further. The general wholesale commodity price index declined 3.5 per cent from mid-January to mid-February, but has subsequently shown no decisive trend.

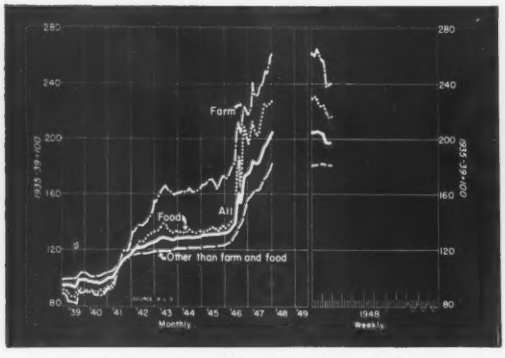
Some retail food prices followed their wholesale counterparts downward and effected the first monthly decline in the cost of living since October. Security prices dropped sharply for a few days, then leveled off. Dollar volume of sales at representative New England department stores showed declines from year-ago levels in six of the seven weeks between January 19 and March 6. New England purchasing agents report increased caution in forward buying. Premiums on slightly used new cars are disappearing. Luxury type hotels report loss of patronage to less expensive places. Restaurants and drinking places report decreased business. In brief, there is increasing evidence that people are becoming dollar conscious and are deferring many expenditures for nonessentials.

Statistics necessarily lag behind current news so that a quantitative evaluation of the effect of the recent price drop on business is as yet difficult to obtain. Available statistics for earlier months may reflect causal factors which contributed to that drop, or may reflect factors which are no longer operative.

New England freight carloadings, for instance, were below year-ago levels for several months up to and including January. Yet persistent shortages of freight cars, an unusually severe winter and the trucking strike have undoubtedly been contributing factors. Likewise, New England cotton mill consumption has lagged for several months, due largely to production of finer and lighter weight goods. New England construction contract awards were disappointing in December, January and the first half of February, but may not necessarily be correlated with the commodity price drop.

Nonagricultural employment in New England declined somewhat more than seasonally in January, and was about two per cent lower than in January 1947. Seasonal declines were to be expected in retail trade and construction. Brisk activity prevailed in most of the textile, apparel and shoe industries, except for the production of men's high quality and dress shoes. The silverware industry was in strong condition, and jewelry production dropped less than anticipated. Demand was strong for some types of machinery, but other metal products manufacturers were bothered by steel shortages and order cancellations. Employment dropped in the plastics and rubber tire industries. Business was apparently seeking to avoid undue inventory accumulation and imprudent wage increases.

WHOLESALE PRICES

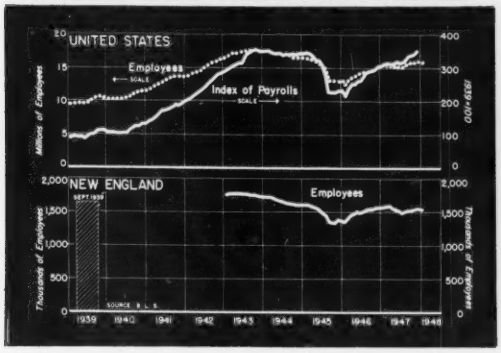


Average wholesale commodity prices dropped about 3.5 per cent by mid-February from their peak in mid-January. Farm products dropped an average of 10 per cent over the same period, and some individual commodities far more. Prices since the middle of February have shown little net change.

CONSUMER PRICES

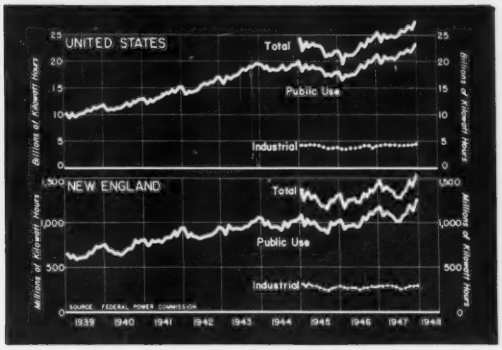
Average retail prices of goods and services in January 1948 exceeded prewar levels by 69 per cent in the country and 58 per cent in Massachusetts. Reductions in some retail food prices in early February offset further increases in other retail prices. Consumer resistance to high prices continues.

FACTORY EMPLOYMENT AND PAYROLLS



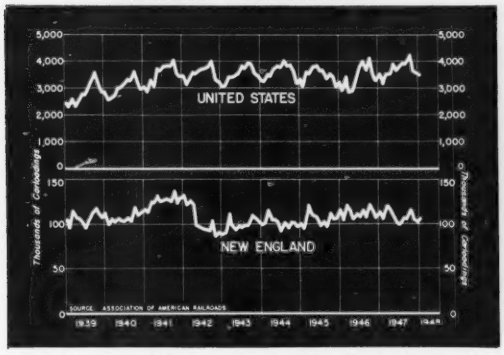
Reports from four of the six states indicate that manufacturing employment in New England underwent a customary seasonal decline from December to January after five months of uninterrupted advance. January 1948 employment appeared to be about two per cent below that of January 1947.

ELECTRIC ENERGY PRODUCTION



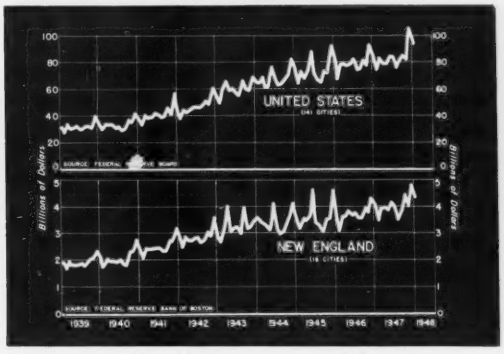
Electric energy produced in New England during December 1947 established an all-time monthly record. Total production in 1947 for the region exceeded that of 1946 by 7.1 per cent, although production in the northern states was considerably reduced in late 1947 by drought conditions.

FREIGHT CARLOADINGS



Freight cars loaded on seven major New England railroads in January 1948 were fewer than in the corresponding month of the previous year, as has been the case in each month since May 1947. Continued shortages of freight cars and an unusually severe winter have contributed to this situation.

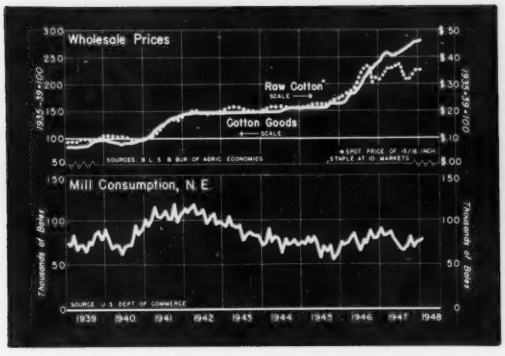
BANK DEBITS



The volume of bank debits in January 1948 decreased seasonally from December, but exceeded that of January 1947 by 6.3 per cent in New England. The most unfavorable trend among New England reporting cities was in Brockton where business has suffered from depressed shoe sales.

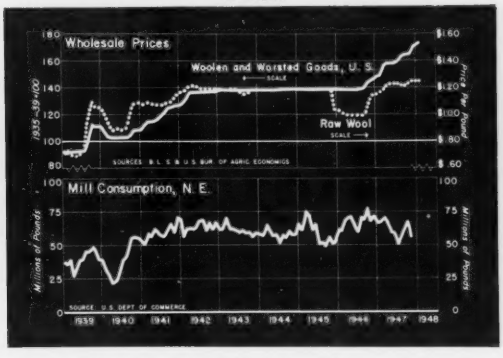
Industry

COTTON



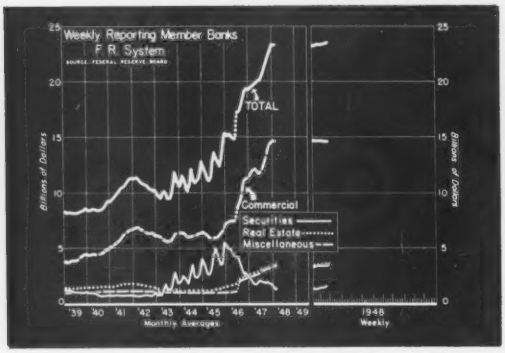
Raw cotton prices dropped slightly in January, more sharply in February. Cotton goods prices advanced further in January. Consumption of raw cotton at New England mills increased 3.8 per cent from December to January. Recent production has included a higher percentage of fine grade goods.

WOOL

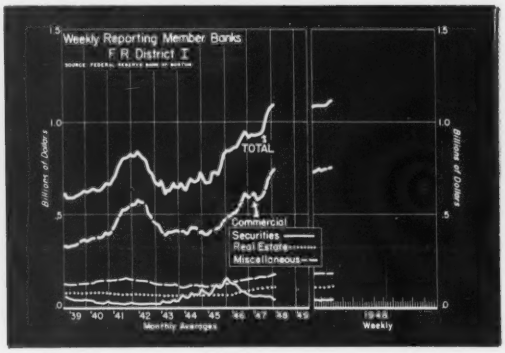

Wholesale Prices
Woolen and Worsted Goods, U. S.
Raw Wool
Mill Consumption, N. E.
1939 1940 1941 1942 1943 1944 1945 1946 1947 1948

New England's woolen and worsted industry remains very active. Employment in Lawrence mills continues to run at record-high levels, and worsted orders are booked far ahead. Despite sharp reductions in some commodity prices in February, prices for worsteds were raised by a leading producer

LOANS AND DISCOUNTS

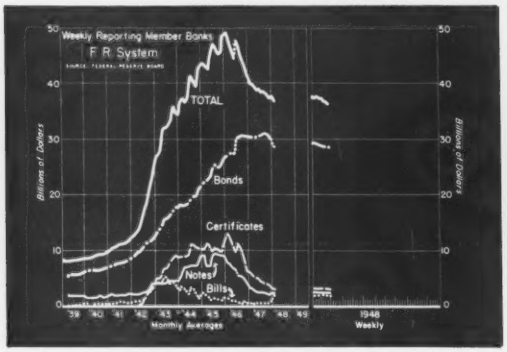


Reaction in commodity prices, following closely steps by monetary authorities to cut excessive use of credit, brought some caution in lending. Total loans rose only $110 million between December 31 and March 3. Business loans were slightly lower. Changes in other loan classes offset.

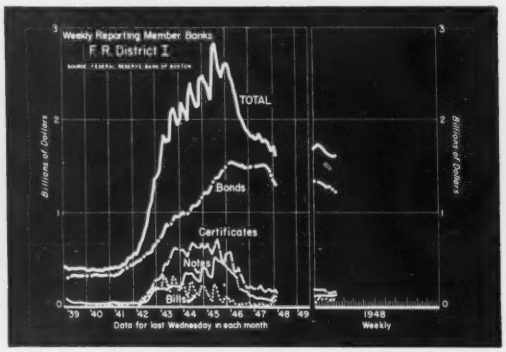


Total loans of N. E. banks increased between December 31 and March 3 relatively more than for the U. S. The increase in commercial, real estate, and consumer loans was at a slower rate than during the last six months of 1947. Loans to carry securities decreased slightly.

BANK HOLDINGS OF U. S. SECURITIES

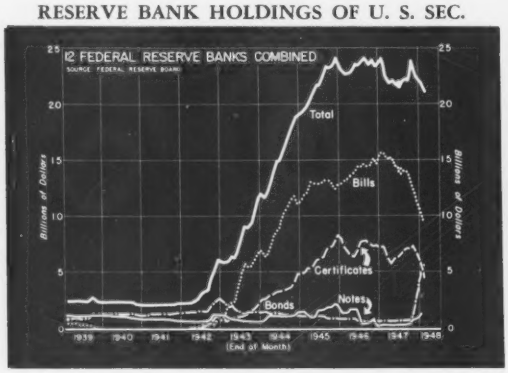


Accumulation of the Treasury's cash surplus from taxes reduced the money supply. The reduction was offset in part by sales of U. S. bonds to the Reserve System, which replenished bank reserves. N. E. banks reduced U. S. securities about 4 per cent from December 31–March 3, or about $71 million.



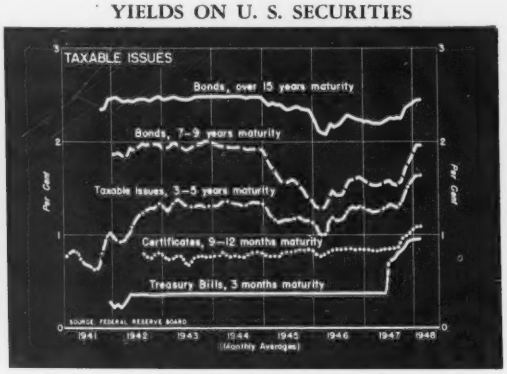
Pressure on bank reserves arising from tax payments and credit policy was severe in February and caused a drop in U. S. security holdings. Between December 31 and March 3 these holdings were reduced 3.7 per cent — $1,382 million. Private demand deposits were reduced $1,389 million.

RESERVE BANK HOLDINGS OF U. S. SEC.



Federal Reserve banks added about $4 billion to holdings of U. S. bonds between December 24 and March 3. Purchases were made from both bank and nonbank holders. Redemptions and sales of bills and certificates, however, more than offset purchases by about $1 billion.

YIELDS ON U. S. SECURITIES


TAXABLE ISSUES
Bonds, over 15 years maturity
Bonds, 7–9 years maturity
Taxable issues, 3–5 years maturity
Certificates, 9–12 months maturity
Treasury Bills, 3 months maturity
Per Cent
1941 1942 1943 1944 1945 1946 1947 1948
(Monthly Averages)

Reduced sales of U. S. bonds and the slight recession in yields on AAA corporate bonds in February appear to reflect greater confidence in the prospect for stability in long-term interest rates than prevailed at the year-end. Yields on U. S. securities reflect current rate policy.